MCHB-TS-HPR
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EXECUTIVE SUMMARY
HEALTH PROMOTION AND PREVENTION INITIATIVES (HPPI) PROJECT OUTCOMES REGARDING ELECTRONIC MEDICAL DATA COLLECTION

PURPOSE.
To summarize Health Promotion and Prevention Initiatives (HPPI) Program project outcomes regarding electronic medical data collection at US Army healthcare facilities

CONCLUSIONS.
- Electronic medical data collection (EMDC) enables more efficient patient flow in the healthcare system.
- EMDC can prevent medical errors and enable better tracking and follow-up of chronic preventable medical conditions.
- The portability of EMDC provides better continuity of care for a mobile Army population and better communication between healthcare providers.
- Successful EMDC implementation must include reports that can be customized to local installation needs.
- The essential components of EMDC implementation are data acquisition, data centralization, data analysis, and report generation.

LESSONS LEARNED.
- EMDC is an effective tool for categorizing follow-up levels for preventable chronic disease.
- Implementation of an EMDC system works best in small stages.
- ICD-9 Code lists can be unwieldy in an electronic format and very difficult for healthcare providers to use.
- EMDC/software application update cycles can be lengthy (10 – 12 weeks or longer) and can hamper effective implementation of EMDC.
- Computer equipment and network/internet access issues must be addressed before EMDC implementation occurs in order to avoid adverse impact on work flow.
- Healthcare provider buy-in should be obtained as early in the EMDC process as possible. Ideally, buy-in should be secured well before EMDC system implementation.
- Adequate EMDC system training is essential and should be provided as frequently as possible.

FURTHER STUDY NEEDED.
- A best practice real-time data entry process for healthcare providers has not yet been identified.
- Current exam room configurations are often not conducive to EMDC. The two biggest configuration issues are equipment placement and data entry security.

DATA CAPTURE TOOLS ALREADY IN PLACE IN ARMY HEALTHCARE

- DD 2808 (Report of Medical Exam)
- HRA/HEAR (health risk appraisals)
- Soldier Readiness Processing (SRP) data capture
- CHCS II automated reports (community health referrals)

SUPPORT FOR CONTINUED DEVELOPMENT AND RESEARCH.
The HPPI Program has supported many projects that include EMDC and will continue to support projects that will enhance implementation of the electronic medical record in the Army healthcare system. Abstracts for HPPI projects that included a robust EMDC system are provided below.

Longitudinal Health Risk Assessment Program (LHRAP) – active project
Background: Every year, the Army loses Soldiers to preventable chronic disease. Frequently, these Soldiers are leaders. Losing these leaders impacts force readiness.
Objectives: The long-term goals of the LHRAP are to decrease the incidence of preventable chronic disease, decrease health care costs, and create a foundation for electronic patient records. The LHRAP assesses the medical history and physical exam of active duty Soldiers aged 35 and older using evidence-based health screening algorithms. The LHRAP also uses an electronic history and physical form, which includes screening algorithms and prompts for recommended treatment based on follow-up classification.
Results: High follow-up classification: 14% of participants; intermediate follow-up: 24%; metabolic syndrome was identified for 8% of participants. Referrals were made for education, counseling, interventions, or further medical tests for participants requiring high and intermediate follow-up.
Implementation site: Kimbrough Ambulatory Care Center, Fort Meade

Creating Useful Report Templates for CHCS II – active project
Background: This project effectively manages patient data through the use of technology.
Innovative project aspects: CHCS II is web-based and allows for greater flexibility for documenting patient interactions. CHCS II stores all documents, templates, and patient interactions electronically. This eliminates the need for data transfer from hard copy tests and surveys to other databases. This project manages community health clinic patient information.
Demonstration of program effectiveness: CHCS II has been tested and fielded as a best practice model for electronically documenting patient interactions. Its web-based design provides effective report template and database management. All documentation is in one place with no need for collection and management of hard copy data files.
Implementation site: Tripler Army Medical Center

1ST Corps Readiness Outcomes & Wellness Service (1st C.R.O.W.S.) – active project
Background: This project uses ICDB and MEDBASE to capture Soldier Readiness Processing (SRP) data.
Innovative program aspects: DD 2795 (Pre-Deployment Health Assessment), DD 2796 (Post-Deployment Health Assessment), HRA II, and the ICDB Injury Prevention Scorecard feed into this system.
Objectives: Ensure a fit, ready, and deployable force; improve morale and retainability; maintain health and quality of life; maximize combat readiness; decrease incidence of non-battle

injury; assess Soldier health status; implement targeted interventions and referrals based on identified health risks; put qualitative measurements in place to capture outcomes.
Project outcomes: more than 19K Soldiers have completed Health Risk Appraisals; prior to implementation of this program: 50% readiness status for all units – now there is an 80 to 100% unit readiness status; cost avoidance: more than $60K per 150 Soldiers; cost avoidance per battalion: more than $240K; manpower FTE days saved: 452.
Implementation site: Madigan Army Medical Center, Fort Lewis

Dental Population Health Metrics – active project
Background: A standardized system was implemented that enables dental care providers to identify both high-risk and low-risk patients and tailor care accordingly.
Innovative project aspects: The existing dental classification system was refined to include measures for caries risk and tobacco use. These measures are captured electronically in the Corporate Dental Application (CDA).
Project outcomes: The initiative succeeded in making the caries risk and tobacco risk assessments mandatory during the annual dental exam. Caries risk data continues to be collected.
Implementation site: all Army DENTAC locations

Web-based Quarters and Profile System – discontinued project
Background: This system was used to document Soldier Readiness Processing (SRP)-relevant information and manage all tobacco cessation patients.
Objectives: The original goal was to create a centralized tracking system for sick slips and profiles given to Active Duty personnel. The system used a web-based database so that real-time analysis of injury trends and illness outbreaks would be possible.
Innovative features: The project created a system that could provide decision-support data in real-time. A centralized database of Preventive Medicine data was created and implemented that could be managed from a standard user interface.
Outcomes: This system documented more than 100,000 vaccinations (and all reactions) and captured data on 553 post-deployment soldiers, 5754 pre-deployment soldiers, and 8004 routine in-processing soldiers. There was a 50 to 60% improvement in data acquisition and report generation as measured by an increase in the amount of centrally located data and the reports that were generated.
Implementation site: Baynes-Jones Army Community Hospital, Fort Polk. Note: use of this system was discontinued when the Regional decision was made to use the MEDBASE system.